

## REMARKS

Upon entry of the present amendment, claims 157 and 159-163 are pending. Claims 157, 159, 162, and 163 have been amended; the amendments are supported by disclosure throughout the specification, e.g., at page 12, line 28, to page 13, line 36, and at page 34, line 14, to page 40, line 6, of the specification.

No new matter has been added by this amendment.

### **I. Double Patenting**

Claims 157-161 and 163 were rejected for obviousness-type double patenting over claims 1-5 of U.S. Patent No. 5,480,772. Claims 157-161 and 163 were rejected for obviousness-type double patenting over claims 1-14 of U.S. Patent No. 5,651,992. Claims 157-161 were rejected for obviousness-type double patenting over claims 1-29 of U.S. Patent No. 5,773,217. A terminal disclaimer in compliance with 37 C.F.R. §1.321(c) is filed herewith. Withdrawal of these rejections is therefore requested.

### **II. Claim Rejections Under 35 U.S.C. § 112, first paragraph**

The claims were rejected for overbreadth and lack of enablement. To put the claims into condition for allowance and to expedite prosecution, the claims were amended in accordance with the Examiner's guidance regarding claim scope.

The Examiner stated:

Claims 157-161 are rejected under 35 U.S.C. 112, first paragraph, because the specification, while being enabling for a method of activating a non-dividing nucleus comprising isolating a nucleus, permeablizing the nucleus, incubating the nucleus with cytoplasm of an metaphase II oocyte, where the oocyte is from the same species as the nucleus, and incubating the nucleus with an activating egg cytoplasm, where the egg is from the same species as the nucleus, wherein said nucleus undergoes swelling, nucleic acid replication and entry into mitosis, does not reasonably provide enablement for any cell in metaphase II, where the nucleus, the cytoplasm and the recipient egg are of

different species and activation without incubation with activating egg cytoplasm.

The claims have been amended as suggested by the Examiner. Independent claim 157 has been amended to incorporate the requirements of claim 158 (contacting nucleus with activating egg cytoplasm) and to require that the cell and the nucleus are of the same species. The scope of the amended claims is commensurate with the scope of the teachings provided by the specification as indicated by the Examiner. Withdrawal of this rejection is therefore requested.

With respect to claims 162 and 163, the Examiner stated:

The specification, while being enabling for a method of producing a nuclear transfer embryo comprising isolating a nucleus, permeablizing the nucleus, incubating the nucleus with cytoplasm of an metaphase II oocyte, where the oocyte is from the same species as the nucleus, and incubating the nucleus with an activating egg cytoplasm, where the egg is from the same species as the nucleus, transplanting the activated nucleus into an enucleated egg of the same species as the nucleus to form a nuclear transfer embryo, and a method for the in vitro activation of a non-dividing nucleus comprising the steps of isolating a nucleus, pretreating the nucleus with cytoplasm of an metaphase II oocyte, where the oocyte is from the same species as the nucleus, and incubating the nucleus with an activating egg cytoplasm, where the egg is from the same species as the nucleus, wherein said nucleus is activated to undergo DNA replication, does not reasonably provide enablement for any cell in metaphase II, where the nucleus, the CSF and activating cytoplasm and recipient egg are of different species and activation without incubation with activating egg cytoplasm.

The claims have been amended to meet the enablement rejection as suggested by the Examiner. The claims now require that the nucleus, CSF and activating cytoplasm, and recipient egg are of the same species. The claims also require activation with an activating egg cytoplasm.

Regarding claim 157, the Examiner further commented:

It appears that for crucial elements of the CSF cytoplasm and the activating egg cytoplasm to enter the nucleus, the nucleus must first be permeablized, as the

specification does not teach the at the claimed method results in nuclear envelope breakdown, a requirement for exposure of the donor nucleit to MPF (Kono, page 76, col. 2, parag. 2, lines 1-5).

Nuclear envelope breakdown occurs as a result of contacting the nucleus with cystostatic factor as described at page 81, lines 10-21, of the specification. Thus, the crucial elements of the CSF cytoplasm and activating cytoplasm gain access to the nucleus as a result of the step of contacting the nucleus with a cytostatic factor containing cytoplasm, as claimed.

In view of these amendments, Applicants submit that the rejection should be withdrawn.

**III. Claim Rejections Under 35 U.S.C. § 112, second paragraph**

Claim 163 were rejected for indefiniteness. The Examiner stated "Claim 163 is confusing in step 'b' as it states to treat a pretreated nucleus to produce a pretreated nucleus." The claim has been amended to delete the claim term "pretreated" in step (b) and (c). This rejection can now be withdrawn.

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### CONCLUSION

On the basis of the foregoing arguments and amendments, Applicants respectfully submit that the pending claims are in condition for allowance.

If there are any questions regarding these amendments and remarks, the Examiner is encouraged to contact any of the undersigned at the telephone number provided below. A petition for extension of time and required fee is filed herewith. The Commissioner is hereby authorized to charge any additional fees that may be due, or credit any overpayment of same, to Deposit Account No. 50-0311 (Reference No. 21578-010).

Respectfully submitted,



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